

PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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2005 -04- 11

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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(PCT Rule 71.1)

Date of mailing (day/month/year)	06.04.2005
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Applicant's or agent's reference PA134730/PCT		IMPORTANT NOTIFICATION
International application No. PCT/IB2004/000706	International filing date (day/month/year) 12.03.2004	Priority date (day/month/year) 14.03.2003
Applicant ELEMENT SIX (PTY) LTD et al.		

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.



<p>Name and mailing address of the international preliminary examining authority:</p> <div style="text-align: center; margin-top: 10px;"> </div> <p>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</p>	<p>Authorized Officer</p> <p>Wagnersen, L</p> <p>Tel. +49 89 2399-5915</p> <div style="text-align: right; margin-top: 10px;"> </div>
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PA134730/PCT	FOR FURTHER ACTION		See Form PCT/PEA416
International application No. PCT/IB2004/000706	International filing date (<i>day/month/year</i>) 12.03.2004	Priority date (<i>day/month/year</i>) 14.03.2003	
International Patent Classification (IPC) or national classification and IPC E21B10/56			
Applicant ELEMENT SIX (PTY) LTD et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> <i>sent to the applicant and to the International Bureau</i> a total of sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 28.09.2004		Date of completion of this report 06.04.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Stroemmen, H. Telephone No. +49 89 2399-7345 <div style="text-align: right;">  </div>	

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY****Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-8 as originally filed

Claims, Numbers

7-20 as originally filed

1-6 received on 16.03.2005 with letter of 16.03.2005

Drawings, Sheets

1/2-2/2 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/B2004/000706

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-20
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-20
Industrial applicability (IA)	Yes: Claims	1-20
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

PCT/IB2004/000706

Reference is made to the following documents:

D1: EP-A-0411 831
D2: US-B1-6 290 008
D3: US-A-4 694 918

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

V-1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

As far as said claim can be understood (see section VIII of this preliminary report), and in light of the latest arguments presented by the applicant, the document D1, which is regarded as being the closest prior art to the subject-matter of claim 1, discloses the following features thereof (the references in parentheses applying to this document):

A tool component (fig. 1) comprising a working layer (10) of ultra-hard abrasive bonded to a substrate (11) along an interface, the working layer presenting a working surface and a periphery around the working surface which provides a cutting edge for the insert, the working layer of ultra-hard abrasive having a first region (12) extending into the working layer from the working surface, and a second region (13) in contact with the first region (12), the wear resistance of the first region being less than that of the second region (col. 5, l. 8-15).

The subject-matter of claim 1 therefore differs from this known tool in that:

The wear resistance of the first region is between 50% and 95% of that of the second region.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- V-2 The problem to be solved by the present invention may therefore be regarded as how to obtain the optimum wear resistance between the two regions.

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) since it merely consists in the selection of a an inherently broad percentage range (almost half of what is possible). In general a selection can only be regarded as inventive, if the range specified presents unexpected effects or properties in relation to the rest of the range and it is unlikely that such a broad range: 50%-95% implies such effects.

- V-3 Similar arguments apply also for lack of inventive step of the additional features of claims 2-4 (Article 33(3) PCT).

- V-4 The additional features of claims 5-20 are normal design possibilities and are all disclosed in D3:

Claims 5-7:	See col. 17, l. 43-44.
Claims 8-10, 17-20:	See col. 6, l. 29-35.
Claims 11-13:	See col. 3; l. 4-28.
Claims 14-16:	See col. 19, l. 22-34.

Said claims do therefore not involve an inventive step (Article 33(3) PCT).

Re Item VII

Certain defects in the international application

- VII-1 The independent claim is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the most relevant prior art being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

**INTERNATIONAL PRELIMINARY
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International application No.

PCT/IB2004/000706

- VII-2 The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- VII-3 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 and D3 is not mentioned in the description, nor are these documents identified therein.

Re Item VIII

Certain observations on the international application

- VIII-1 The amendment filed with the letter dated 16.03.2005 do seemingly not find a basis in the application documents as originally filed. In particular, this is not the case for the paragraph indicated by the applicant (Article 34(2)(b) PCT). For the sake of the feature analysis, claim 1 has been left as previously filed.
- VIII-2 The term "insert" as used in claim 1, line 4 lacks an antecedent. Said claim is therefore not clear (Article 6 PCT).